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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,429	10/06/2000	Hajime Tabata	0505-0704P	1288

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EXAMINER

NI, SUHAN

ART UNIT PAPER NUMBER

2643

DATE MAILED: 01/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/680,429

Applicant(s)

TABATA, HAJIME

Examiner

Suhan Ni

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09/30/2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-16 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's reply to restriction requirement filed 09/30/2003 is persuasive and, therefore, the restriction requirement, Office Action dated 08/25/2003 is withdrawn.
2. This communication is responsive to the amendment filed on 06/06/2003.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szilagyi et al. (US-6,396,197).

Regarding claims 1-4, 7-10 and 15-16, Szilagyi et al. disclose a speaker of a helmet (Figs. 6-7), said speaker (10) comprising: a piezo-film (16) curvedly supported to form at least one curved portion, said flat piezo-film having at least a radius of curvature and a principal surface (Fig. 1). But Szilagyi et al. do not clearly teach that the radius is in a range of equal or larger than 20 cm or the surface is in a range equal or larger than 40 cm\*cm as claimed. Since Szilagyi et al. do not specially restrict the radius or the surface area of the piezo-film speaker, and clearly suggest to provide a contour with variable radii of curvature for the speaker (claim 6); further, providing a desirable curved piezo-film speaker for a specific application is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to be motivated to provide a suitable piezo-film speaker with a desirable

configurations, such as a slightly curved configuration (with a rather large radius and sufficient active surface area), for the helmet, in order to generate desirable sound for the user of the helmet.

Regarding claims 5-6 and 11-12, Szilagyi et al. do not clearly teach that a thickness of the film as claimed. Since Szilagyi et al. do not specially restrict the thickness of the piezo-film for the speaker and suggest to utilize the piezo-film speaker in many applications with desirable configurations, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide a piezo-film with a desirable thickness, such as a 110 um or 28 um thickness for the speaker, in order to generate desirable sound in many different applications.

Regarding claim 13, Szilagyi et al. do not clearly teach all inners as claimed. Since providing one or more suitable liner(s)/inner(s) for a helmet is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide all suitable liners and/or inners for the helmet as an alternate choice, in order to provide comfort for a user, and make the helmet more durable.

#### ***Allowable Subject Matter***

4. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Amendment***

5. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

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*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(703)-308-9322**, and the number for fax machine is **(703)-305-9508**. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(703) 305-4708**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(703) 305-3900**.

Suhan Ni  
Patent Examiner  
Art Unit 2643  
USPTO

  
SUHAN NI  
PATENT EXAMINER

12/26/2003